

SAC-5P-M12MSB/0,2-900/M12FSB - Bus system cable



1521041

<https://www.phoenixcontact.com/us/products/1521041>

Technical data

Product properties

Product type	Data cable preassembled
Sensor type	INTERBUS
Number of positions	5
No. of cable outlets	1
Shielded	yes
Coding	B

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Interfaces

Bus system	INTERBUS
Signal type/category	INTERBUS

Signaling

Status display	no
Status display present	no

Electrical properties

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A

Mechanical properties

Mechanical data	
Insertion/withdrawal cycles	≥ 100

Material specifications

Flammability rating according to UL 94	V0
Seal material	NBR
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material for screw connection	Zinc die-cast, nickel-plated

Connector

Connection 1

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Type	Plug straight M12
Number of positions	5
Coding type	B (inverse)

Connection 2

Type	Socket straight M12
Number of positions	5
Coding type	B

Cable/line

Cable length	0.2 m
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INTERBUS [900]

Dimensional drawing



Cable weight	70 kg/km
Number of positions	6
Shielded	yes
Cable type	INTERBUS [900]
Conductor structure	3 x 2 x 0.22 mm ²
Signal speed	0.66 c
Conductor structure signal line	32x 0.10 mm
AWG signal line	24
Conductor cross section	3x 2x 0.22 mm ²
External cable diameter	8.00 mm
Outer sheath, material	PUR
External sheath, color	may green RAL 6017
Conductor material	Bare Cu litz wires
Material wire insulation	PE
Single wire, color	green-yellow, white-brown, gray-pink
Twisted pairs	2 cores to the pair
Overall twist	3 pairs to the core
Insulation resistance	≥ 5 GΩ*km
Coupling resistance	< 250.00 mΩ/m (at 30 MHz)
Loop resistance	≤ 159.80 Ω/km
Wave impedance	120 Ω ±20 % (at 64 kHz)
	100 Ω ±15 % (with 1 MHz)
Cable capacity	≤ 60 nF/km (At 800 Hz)
Nominal voltage, cable	250 V (Peak value, not for high-power applications)

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Test voltage Core/Core	1500 V _{rms}
Test voltage Core/Shield	1000.00 V _{rms}
Minimum bending radius, fixed installation	7.5 x D
Minimum bending radius, flexible installation	15 x D
Smallest bending radius, fixed installation	60 mm
Smallest bending radius, movable installation	120 mm
Dynamic load capacity (bending)	Max. bending cycles: 5000000, Bending radius: 120 mm, Traversing path: 10 m, Traversing rate: 1.6 m/s, Acceleration: 3.2 m/s ²
Near end crosstalk attenuation (NEXT)	≥ 61 dB (at 772 kHz) ≥ 59 dB (with 1 MHz) ≥ 55 dB (at 2 MHz) ≥ 50 dB (at 4 MHz) ≥ 46 dB (at 8 MHz) ≥ 44 dB (at 10 MHz) ≥ 41 dB (at 16 MHz) ≥ 40 dB (at 20 MHz)
Shield attenuation	≤ 15 dB/km (at 256 kHz) ≤ 24 dB/km (at 772 kHz) ≤ 27 dB/km (with 1 MHz) ≤ 52 dB/km (at 4 MHz) ≤ 84 dB/km (at 10 MHz) ≤ 112 dB/km (at 16 MHz) ≤ 119 dB/km (at 20 MHz)
Flame resistance	according to VDE 0472, Part 4, test type B according to IEC 60332-1
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation) -30 °C ... 70 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket) -40 °C ... 80 °C (cable, fixed installation) -30 °C ... 70 °C (Cable, flexible installation)

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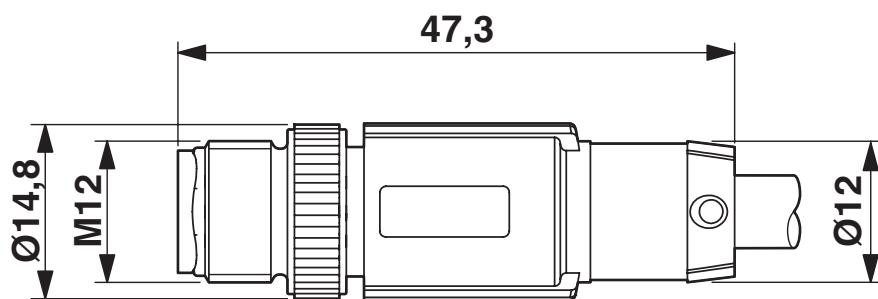


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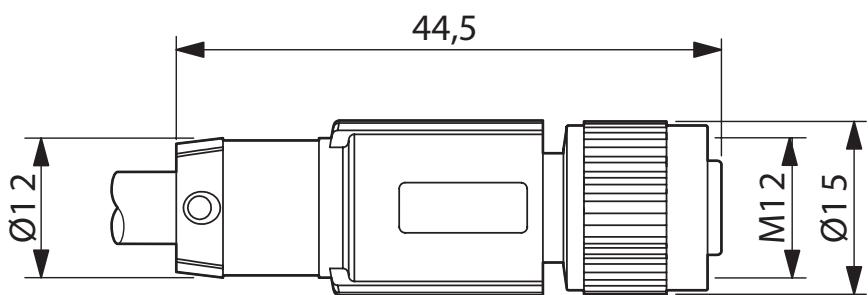
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight, shielded

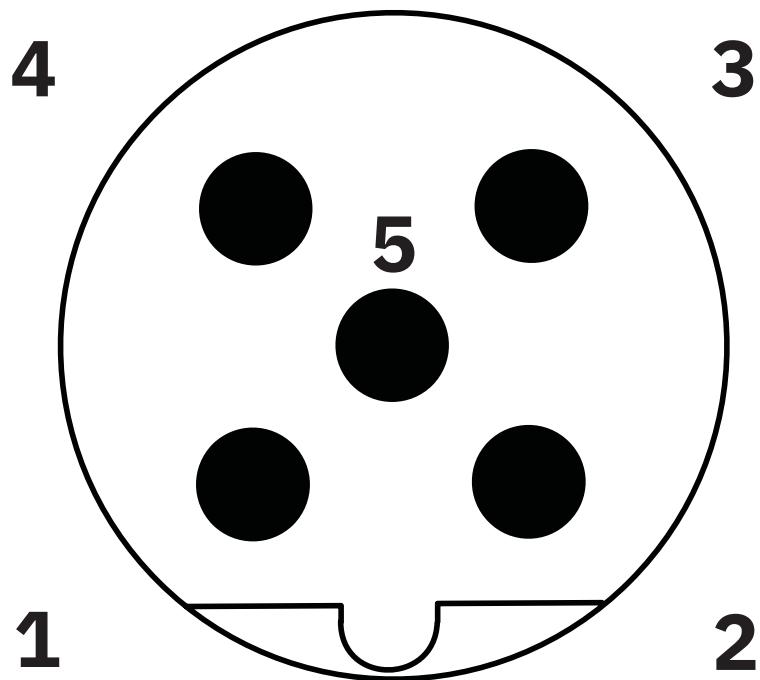
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Schematic diagram



Pin assignment M12 male connector, 5-pos., B-coded, male side

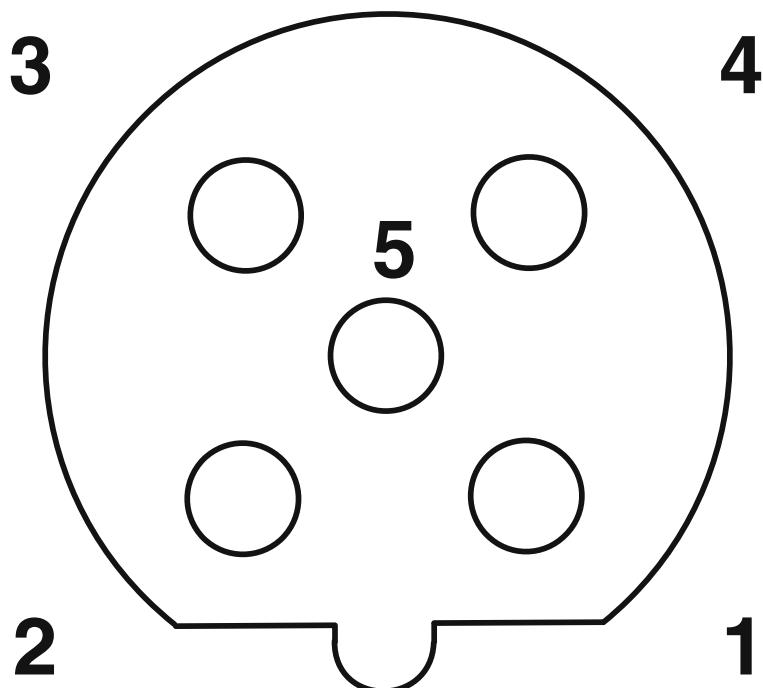
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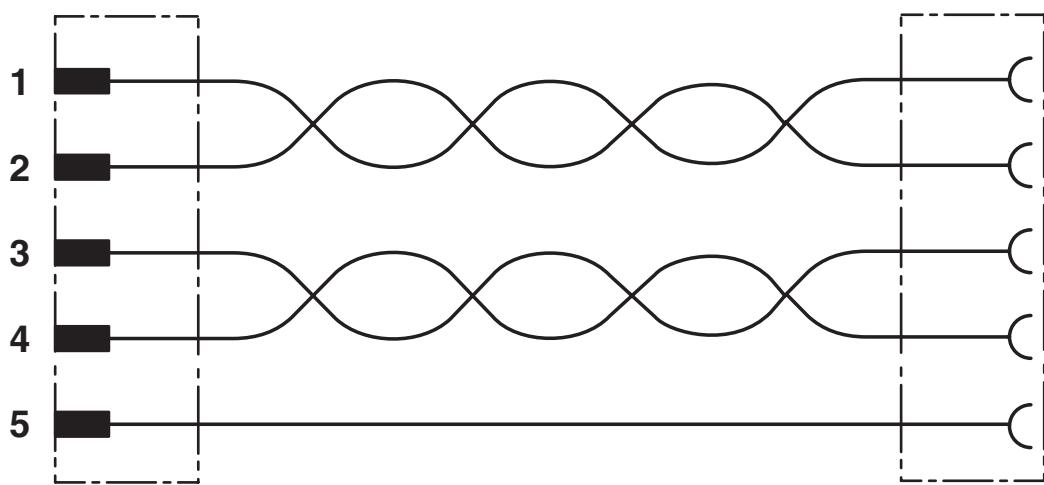
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Schematic diagram



Pin assignment M12 socket, 5-pos., B-coded, female side

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1521041>



EAC-RoHS

Approval ID: RU D-DE.HB35.B.00387

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Classifications

ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

ETIM

ETIM 9.0	EC001855
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UNSPSC

UNSPSC 21.0	26121600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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